REMARKS

In view of the following remarks, the Applicant respectfully requests reconsideration of the pending application.

Objections and Rejections

The Examiner's Action dated October 11, 2002, Paper no. _:

1. rejects claims 2 and 3 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention;
2. rejects claims 1-3 and 5-7 under 35 U.S.C. § 103(a)) as being unpatentable over:
   a. United States Patent no. 5,404,446 entitled "Dual Buffer Video Display System for the Display of Asynchronous Irregular Frame Rate Video Data" which issued April 4, 1995, on an application filed by Ronald J. Bowater, Barry K. Aldred and Stephen P. Woodman ("the Bowater, et al. patent"); in view of
   b. United States Patent no. 5,838,678 entitled "Method and Device for Preprocessing Streams of Encoded Data to Facilitate Decoding Streams Back-to Back" which issued on an application filed July 24, 1996, by Joseph W. Davis and Shawn M. Hayes ("the Davis, et al. patent"); and
3. rejects claims 4 under 35 U.S.C. § 103(a)) as being unpatentable over:.

a. the Bowater, et al. patent as applied to claims 1-3 and 5-7[1]; in view of

b. United States Patent no. 6,310,919 entitled "Method and Apparatus for Adaptively Scaling Motion Vector Information in an Information Stream Decoder" which issued October 30, 2001, on an application filed September 25, 1998, by Dinei Afonso Ferreira Florencio ("the Florencio patent").

The Claimed Invention

As recited in twice amended independent method claim 1, the present invention encompasses:

> [a] method for producing a compressed video bitstream that includes compressed video data for a plurality of frames from data that specifies a single still image
>
> * * *
>
> whereby decoding of the compressed video bitstream produces frames of video which produce images that do not appear to pulse visually.

The invention solves a problem that appears in images produced by a conventional Moving Picture Experts Group ("MPEG") decoder when decoding a conventionally MPEG encoded video bitstream that reproduce a still image, particularly a still image containing text. For conventionally encoded MPEG compressed video data, detail in decoded MPEG still images tends to be lower at the

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[1] Note that while the text in the Examiner's Action dated October 11, 2002, in the first paragraph of section no. 5 on page 5 that rejects pending claim 4 only expressly identifies the Bowater, et al. patent, the immediately following paragraph explaining the rejection in greater detail refers to both "Bowater, et al. and Davis et al."

beginning of each group of pictures ("GOP") when an intra ("I") frame is decoded, increases during decoding of successive predicted ("P") frames and bidirectional ("B") frames in the GOP, only to decrease again upon decoding the next I frame. Thus, a decoding of the MPEG compressed video bitstream of a still image frequently produces a video image that appears to pulse visually, usually at a frequency identical to the frequency at which GOPs occur in the compressed video bitstream, e.g. twice per second. This visual pulsing of the still image produced by decompressing a MPEG compressed video bitstream in many instances makes them commercially unacceptable.

The Cited References

The Bowater, et al. Patent

The Bowater, et al. patent addresses the technological problem that:

> [i]n computer-based video communication systems, a video signal is obtained from the camera at a constant frame rate but, **after transmission across the asynchronous or non-ideal network, the frames arrive at irregular intervals. Some frames arrive early, some are delayed, and bunching can occur.** The display device at the receiving terminal, however, generally requires a constant frame rate supplied to it (e.g., to match the raster scan rate of a CRT). In such systems it is therefore necessary to match the irregular arrival of frames over the network with the constant supply required to the output screen.
>
> * * *
>
> The designer of computer based video communication systems is . . . faced with the problem of how to achieve regular play-out of the asynchronous incoming video signal while, at the same time, minimising the number of buffered video frames. (Col. 1, lines 38-64) (Emphasis supplied.)

Exhibit A to this Response presents those FIGs. and texts in the Bowater, et al. patent that are pertinent to the invention encompassed by the pending claims. The FIGs. and texts in Exhibit A hereto establish that the Bowater, et al. patent, discloses:

1. an apparatus and procedure for buffering **motion** video[2] data in a decoding device prior to displaying an image on a screen that accommodates irregular arrival of frames of video data due to their transmission across an asynchronous or non-ideal network;[3] and

2. accommodating insufficient data arriving at the decoding device via the asynchronous or non-ideal network by:

   a. temporarily freezing the image appearing on the screen by adding null frames;[4] and

   b. subsequently throwing away real data when data of the delayed frames of data does arrive.[5]

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[2] The Bowater, et al. patent necessarily addresses problems associated with "motion" video rather than video of still images because frames arriving at irregular intervals cannot cause a problem for display of a "single still image." Furthermore, the Bowater, et al. patent in col. 4 at lines 18-28 expressly describes the image as "freezing" when "null frames are loaded into the AVK." If a still image were being displayed, one would not observe the image "freezing" when "null frames are loaded into the AVK."

See also the accompanying declaration of Mark Conover.

[3] The Bowater, et al. patent col. 1, lines 38-49.

[4] The Bowater, et al. patent col. 3, line 65 - col. 6, line 28.

[5] The Bowater, et al. patent col. 4, lines 29-41.

Despite diligently searching the Bowater, et al. patent, Applicant is unable to find there any disclosure or even a suggestion that the disclosed buffering technique might be used with anything other than motion video. That is, Applicant is unable to find andy disclosure or suggestion in the Bowater, et al. patent that it might be useful in connection with still images, particularly for preventing still images from pulsing visually.

The Davis, et al. Patent

FIGs. 2, 3A, 3B, 5 and 6 of the Davis, et al. patent respectively illustrate:

1. FIG. 2, the syntax of an MPEG II PES packet;
2. FIGS. 3a and 3b, the organization of an MPEG II video sequence;
3. FIG. 5, the structure of a picture header of the MPEG II video sequence of FIGS. 3a and 3b; and
4. FIG. 6, the structure of a group of pictures header of the MPEG II video sequence of FIGS. 3a and 3b.

The Davis, et al. patent provides the illustrations listed above as background art necessary for a proper understanding of the invention which that reference's discloses.

Exhibit B to this Response presents those FIGs. and texts in the Davis, et al. patent that are pertinent to the invention encompassed by the pending claims. The FIGs. and texts in Exhibit B hereto establish that the problem solved by the Davis, et al. patent is eliminating a one (1) second delay that occurs if both

the video decoder and the audio decoder must be reset before beginning to decode a subsequent program.[6]

To solve the preceding technological problem the Davis, et al. patent discloses a method which:

1. first verifies that the multiplexed stream complies with an encoding standard;[7]
2. preprocesses packets of the packetized and encoded:
   a. video sequence such that no video artifacts are produced when the video decoder decodes the immediately following encoded video sequence;[8] and
   b. audio data sequence such that its:
      i. start time is within a first predetermined time of the start time of the video sequence;[9] and
      ii. temporal length is within a second predetermined time of the temporal length of the video sequence.[10]

The step of preprocessing the packets of the packetized, encoded, video sequence preferably includes deleting any video frames:

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[6] The Davis, et al. patent col. 5, lines 3-6.

[7] The Davis, et al. patent col. 6, lines 3-5.

[8] The Davis, et al. patent col. 6, lines 5-8.

[9] The Davis, et al. patent col. 6, lines 8-11.

[10] The Davis, et al. patent col. 6, lines 11-13.

1. that cannot be decoded if video frames of the video sequence are not temporally correct;[11] and
2. following a code indicating an end of the encoded video sequence.[12]

The step of preprocessing the packets of the packetized, encoded, audio sequence preferably includes:

1. removing any partial audio frames;[13]
2. adjusting the number of audio frames, if necessary:
   i. so the audio and video sequences start within the first predetermined time;[14] and
   ii. such that the temporal lengths of the audio and video sequences are within the second predetermined time.[15]

Despite diligently searching of the Davis, et al. patent, Applicant is unable to find:

1. any mention there that the disclosed preprocessing method may be used advantageously in encoding still images in accordance with the MPEG I or MPEG II standards, or
2. using null frames in any compressed video encoding.

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[11] The Davis, et al. patent col. 6, lines 15-17.

[12] The Davis, et al. patent col. 6, lines 17-19.

[13] The Davis, et al. patent col. 6, lines 19-21.

[14] The Davis, et al. patent col. 6, lines 21-24.

[15] The Davis, et al. patent col. 6, lines 24-27.

Furthermore, despite diligently searching the Davis, et al. patent Applicant is also unable to find any disclosure or suggestion that the disclosed preprocessing technique prevents still images from pulsing visually.

Thus, at best, the Davis, et al. patent discloses:

1. in FIGs. 2, 3A, 3B, 5 and 6 some information about how compressed video data may be encoded in accordance with the MPEG standard; and

2. that video data compressed in accordance with the MPEG standard can be pre-processed to avoid a one (1) second gap at junctions between different MPEG encoded programs.

The Florencio, et al. Patent

The Florencio, et al. patent discloses an MPEG-like decoder, depicted in FIG. 1, that receives and decodes a compressed video information stream IN to produce a video output stream OUT. Beginning in column 4 at line 60 and continuing through column 5 at line 12, the Florencio, et al. patent describes the decoder as follows.

> The MPEG-like decoder 100 comprises an input buffer memory module 111, a variable length decoder (VLD) module 112, an inverse quantizer (IQ) module 113, an inverse discrete cosine transform (IDCT) module 114, a summer 115, a motion compensation module 116, an output buffer module 118, an anchor frame memory module 117, a pixel processor 120 and a motion vector (MV) processor 130.
>
> The input buffer memory module 111 receives the compressed video stream IN, illustratively a variable length encoded bitstream representing, e.g., a high definition television signal (HDTV) or standard definition televi-

> sion signal (SDTV) output from a transport demultiplexer/decoder circuit (not shown). The input buffer memory module 111 is used to temporarily store the received compressed video stream IN until the variable length decoder module 112 is ready to accept the video data for processing. The VLD 112 has an input coupled to a data output of the input buffer memory module 111 to retrieve, e.g., the stored variable length encoded video data as data stream S1.

The Applicant is unable to find in the preceding text quoted from the Florencio, et al. patent, which includes all of the text identified in the Examiner's Action dated October 12, 2002, any disclosure that the "variable length encoded bitstream representing, e.g., a high definition television signal (HDTV) or standard definition television signal (SDTV) output from a transport demultiplexer/decoder circuit" received by the "input buffer memory module 111" of the "MPEG-like decoder 100" for a single I frame contains an amount of data that approaches, but remains less than, storage capacity of the "input buffer memory module 111" as alleged in the Examiner's Action dated October 11, 2002, beginning at the bottom of page 5 and continuing to the top of page 6. Applicant is actually unable to find anywhere in the Florencio, et al. patent any disclosure of the amount of "variable length encoded bitstream" which the "input buffer memory module 111" may receive for a single encoded frame of video, or how the amount of "variable length encoded bitstream" received by "input buffer memory module 111" relates to the size of the "input buffer memory module 111."

Furthermore, despite a diligent search the Applicant cannot find **anywhere** in the disclosure of the Florencio, et al. patent anything about "parameters employed in encoding the data for [an]

image" as required by the text of pending dependent claim 4. Since the text of dependent claim 4 expressly requires that:

> **parameters employed in encoding the data for the still image** produce an amount of data for the I frame that approaches, but remains less than, storage capacity of a buffer memory included in a decoder that stores the compressed video bitstream,

even if contrary to fact the Florencio, et al. patent were to disclose that the "input buffer memory module 111" received:

> an amount of data for the I frame that approaches, but remains less than, storage capacity of a buffer memory included in a decoder that stores the compressed video bitstream,

the reference fails to disclose that the amount of data received by the "input buffer memory module 111" is controlled by parameters employed in encoding the image data.

Legal Principles Applicable to Rejections Under 35 U.S.C. 103(a)

Certain well established principles must be applied in assessing whether or not an invention is patentable under 35 U.S.C. 103(a). First, the claims of a patent, which define the invention, are "to be construed in light of the specification and both are to be read with a view to ascertaining the invention." United States v. Adams, 383 U.S. 39, 49, 148 USPQ 479, 482 (1966). The "differences between the prior art and the claims at issue are to be ascertained." Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966). Moreover, it is elementary that the claimed invention must be considered as a whole in deciding obviousness. Litton Industrial Products, Inc. v. Solid State Systems Corp., 755

F.2d 158, 164, 225 USPQ 34, 38 (Fed. Cir. 1985). The prior art as a whole must be considered, and those portions of the prior art arguing against or teaching away from the claimed invention must be considered. Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc., 796 F.2d 443, 448, 230 USPQ 416, 420 (Fed. Cir. 1986), In re Hedges, et al., 783 F.2d 1038, 1041, 228 USPQ 685, 687 (Fed. Cir. 1986).

In Ecolochem, Inc. v. Southern California Edison Company, 227 F.3d 1361, 1371-72, 56 USPQ2d 1065, 1072-73 (Fed. Cir. 2000), the Court of Appeals for the Federal Circuit declared that:

> [i]n In re Dembiczak, we noted that:
>
> > Measuring a claimed invention against the standard established by section 103 requires the oft-difficult but critical step of casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field.
>
> In re Dembiczak, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). We "cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." In re Fine, 837 F.2d 1071, 1075, 5 USPQ2d 1780, 1783 (Fed. Cir. 1988).
>
> Our case law makes clear that **the best defense against hindsight-based obviousness analysis is the rigorous application of the requirement for a showing of a teaching or motivation to combine the prior art references**. See Dembiczak, 175 F.3d at 999, 50 USPQ2d at 1617. "**Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability--the essence of hindsight.**" Id.
>
> "When a rejection depends on a combination of prior art references, there must be some teaching, suggestion, or motivation to combine the references." In re Rouffet, 149 F.3d 1350, 1355, 47 USPQ2d 1453, 1456 (Fed. Cir.

1998) (citing In re Geiger, 815 F.2d 686, 688, 2 USPQ2d 1276, 1278 (Fed. Cir. 1987)).

* * *

"**Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination**." ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). Although the suggestion to combine references may flow from the nature of the problem, see Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc., 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1630 (Fed. Cir. 1996), "**[d]efining the problem in terms of its solution reveals improper hindsight in the selection of the prior art relevant to obviousness**," Monarch Knitting Mach. Corp. v. Sulzer Morat Gmbh, 139 F.3d 877, 880, 45 USPQ2d 1977, 1981 (Fed. Cir. 1998). Therefore, "[w]hen determining the patentability of a claimed invention which combines two known elements, '**the question is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination**.'" In re Beattie, 974 F.2d 1309, 1311-12, 24 USPQ2d 1040, 1042 (Fed. Cir. 1992) (quoting Lindemann, 730 F.2d at 1462, 221 USPQ at 488). (Emphasis supplied.)

Argument

Prior Voluntary Withdrawal of Final Rejection of Claims Bars the Present Rejection of Claims 1-3 and 5-7 for Obviousness Under 35 U.S.C. § 103(a)

This patent application was filed October 8, 1998. During the more than four (4) years that this patent application has been pending in the United States Patent and Trademark Office ("USPTO"), four (4) Examiner's Actions have issued each of which have rejected the application's claims, inter alia, for obviousness under 35 U.S.C. § 103(a). A review of the second Examiner's Action, that was mailed on June 8, 2001, together with subsequent events in this application's prosecution establish that the present rejections of claims 1-3 and 5-7 based upon the Bowater, et. al. and the Davis,

et al. references lacks any merit, and must be immediately withdrawn.

Pages 2 through 5 of the June 8, 2001, Examiner's Action, copies of which appear in Exhibit C attached hereto, made a **final** rejection of claims 1-7 based upon:

1. United States Patent no. 5,689,589 entitled "Data Compression for Palettized Video Images" which issued on an application filed December 1, 1994, by Michael J. Gormish and Martin P. Boliek ("the Gormish, et al. patent"):
2. in view of:
   a. the Bowater, et al. patent; and
   b. the Davis, et al. patent.

On October 5, 2001, the Applicant dispatched to the USPTO a response to the June 8, 2001, Examiner's Action that, inter alia:

1. amended independent claim 1 for the second time;
2. presented arguments why claims 1-7 as amended in that response were patentable over the combined Gormish, et al., Bowater, et al. and Davis, et al. references; and
3. included a Notice of Appeal of the final rejection of claims.

Applicant's (Appellant's) Appeal Brief, which inter alia argued the allowability of claims 1-7 over the combined Gormish, et al., Bowater, et al. and Davis, et al. references, was dispatched to the USPTO on December 7, 2001. **An Examiner's Action mailed February 12, 2002, on page 2, a copy of which appears in Exhibit D attached**

hereto, voluntarily withdrew the final rejection of claims 1-7 based upon the combined Gormish, et al., Bowater, et al. and Davis, et al. references.

Since the rejection of claims 1-3 and 5-7 set forth in the October 11, 2002, Examiner's Action, i.e. the Examiner's Action to which this document responds, relies upon only the Bowater, et al. and Davis, et al. references, i.e. the present rejection omits the Gormish, et al. reference that appeared in the second Examiner's Action which made a final rejection of claims 1-7, **the present rejection of claims 1-3 and 5-7 cannot be more justifiable than the voluntarily withdrawn final rejection of claims from which the Applicant previously appealed. The February 12, 2002, voluntary withdrawal of the appealed final rejection of claims 1-7 necessarily constitutes an admission that those claims traverse rejection based upon a combination of references which included the Bowater, et al. and Davis, et al. patents**.

Since the present rejection of claims 1-3 and 5-7 for obviousness under 35 U.S.C. § 103(a) relies only upon a combination of the Bowater, et al. and Davis, et al. references, for the reason set forth above the present rejection has less merit than the rejection of claims from which the Applicant previously appealed. Furthermore, since the final rejection of claims from which Applicant previously appealed was voluntarily withdrawn by the February 2, 2002, Examiner's Action, **the Applicant respectfully submits that:**

1. in view of the prior voluntary withdrawal of the final rejection of appealed claims 1-7 based upon the Gormish, et al, Bowater, et al. and Davis, et al. references, **claims 1-3 and 5-7 admittedly traverse the present rejection based upon only the combined Bowater, et al. and Davis, et al. references;**

2. **the prior voluntary withdrawal of the final rejection of appealed claims 1-7 based upon the Gormish, et al, Bowater, et al. and Davis, et al. references bars the present rejection of claims 1-3 and 5-7 based upon only the Bowater, et al. and Davis, et al. references; and**

3. **the rejection of claims 1-3 and 5-7 must be immediately withdrawn.**

Claims 1-3 and 5-7 Traverse Rejection for Obviousness Under 35 U.S.C. § 103(a)

If there be any need to do so, set forth below is a detailed explanation of why, based upon the respective disclosures in the cited references, claims 1-3 and 5-7 traverse the rejection under 35 U.S.C. § 103(a) set forth in the Examiner's Action dated October 11, 2002.

The Examiner's Action dated October 11, 2002, in the first and second lines on page 3 alleges that:

> encoding (see column 4, lines 42-68) the data for the **single still image** data, . . . (Emphasis supplied)

First, as set forth above, Applicant is unable to find in the Bowater, et al. patent any disclosure or even a suggestion that the disclosed buffering technique might be used with anything other than motion video. Since for the reasons set forth in the immediately following paragraph the text in column 4, lines 42-68 of the Bowater, et al. patent cited in the preceding quotation fails to disclose "encoding the data for the **single still image** data" as alleged in the Examiner's Action dated October 11, 2002, claims 1-3 and 5-7 traverse the rejection set forth there.

Applicant's diligent search of the Bowater, et al. patent identifies in its text 22 occurrences of the word "still."[16] **Each and every instance of the adjective "still" in the text of the Bowater, et al. patent applies the word to the noun "frame."** The text of the Bowater, et al. patent expressly defines the phrase "still frame" as follows.

> A frame encoded using only spatial compression is known as a "still frame".[17]

In the pending application, the phrase "still image" to input data supplied to the encoding process[18] whereas the Bowater, et al. patent applies the phrase "still frame" to output from the encoding process. Thus the phrase "still frame" as used in the Bowater, et

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[16] Three (3) occurrences in col. 2, lines 57-62; one (1) occurrence in col. 2, line 66; one (1) occurrence in col. 4, line 52; thirteen (13) occurrences in col. 4, line 62 - col. 5, line 31; and four (4) occurrences in claims 6 and 7.

[17] Col. 4, lines 50-51.

[18] See the pending application at lines 2-10 on page 14.

al. patent **has a different meaning** than the phrase "still image" as used in the pending application.

The preceding analysis of the pending application and the Bowater, et al. patent **proves** that the rejection of claims 1-3 and 5-7 in the text quoted above from the first and second lines on page 3 of the Examiner's Action dated October 11, 2002, is a canard.

The Examiner's Action dated October 11, 2002, at the end of the first paragraph on page 3 alleges that:

> decoding of the compressed video bitstream produces frames of video which produce images that do not appear to pulse visually (i.e., the AVK and circular buffer are used to compensate for the variable arrival rate of the video frames, **thereby eliminating viewing distortion and providing images that do not appear to pulse visually**, see column 3, line 19 to column 4, line 41). (Emphasis supplied.)

The text of the Bowater, et al. patent in col. 3 line 65 to col. 4, line 3, i.e. a text that occurs within that identified in the preceding quotation from the Examiner's Action dated October 11, 2002, expressly states that:

> [t]ogether, the AVK and circular buffer compensate for the variable arrival rate of the video frames by introducing a time-lag, T(L), between the received and displayed images. Any frame arriving within T(L) of its nominal arrival time can be properly displayed. Only **if a frame arrives more than T(L) late, will the AVK and circular buffer empty and the video image will freeze**. (Emphasis supplied.)

Applicant observes that an absence of "visual pulsing" differs from freezing of a video image described in the Bowater, et al. patent. Freezing of a video image occurs in motion video when, as explained in the Bowater, et al. patent, compressed data, necessary

for presenting a sequence of video images that appear to move smoothly, arrives late or fails to arrive. As explained in the pending application, visual pulsing occurs in conventionally compressed video because:

> image detail in frames 62 decoded from the conventional MPEG compressed video bitstream 42 that reproduce a still image . . . tends to be lower at the beginning of each GOP 52 when an I frame 54 is decoded, [to] increase during decoding of successive P frames 56 and B frames 58 in the GOP 52, only to decrease again upon decoding the next I frame 54. (See page 9, line 20 through page 10 line 2.)

Since for the preceding reasons "freezing" as used in the Bowater, et al. patent differs from "visual pulsing" as used in the pending application, the text of the Bowater, et al. patent as analyzed in this paragraph **proves** again that the rejection of claims 1-3 and 5-7 in the text quoted above from the end of the first paragraph on page 3 of the Examiner's Action dated October 11, 2002, is a canard.

Not only does the rejection of claims 1-3 and 5-7 for obviousness under 35 U.S.C. § 103(a) set forth in the Examiner's Action dated October 11, 2002, in at least the two preceding ways mischaracterize the disclosure of the Bowater, et al. patent, the rejection of those claims also fails to identify any suggestion, outside of the pending application itself, for combining the disclosure of the Bowater, et al. patent with that of the Davis, et al. patent. Ecolochem, supra, declares that a rejection for obviousness under 35 U.S.C. § 103(a) based upon a combination of references is improper if it fails to identify what suggest a

combination of the references other than the patent application itself.

Applicant is unable to find in the Examiner's Action dated October 11, 2002, any text which identifies what suggests to one of ordinary skill in the art combining the Bowater, et al. and Davis, et al. patents to obtain the claimed invention. The only text that Applicant is able to identify in the Examiner's Action are the two following conclusory statements.

> Therefore, it would have been obvious to one of ordinary skill in the art, having the Bowater et al and Davis et al references in front of him/her and the general knowledge of intra frame processings within the MPEG video compression standard, would have had no difficulty in providing the intra frame processings as taught by Davis et al within the encoder and decoder of Bowater et al thereby providing the encoding of the data for the single still image into data for an intra frame, storing the encoded I frame data, and wherein the assembling the compressed video bitstream combines at least a single copy of the stored I frame if such intra frame processing were not already within the encoding/decoding of Bowater et al for the same well known purposes as claimed.[19]

> Therefore, it would have been obvious to one of ordinary skill in the art, having the Bowater et al and Davis et al references in front of him/her, would have had no difficulty in providing the required header data for the MPEG encoding/decoding as well as including the bitstream stuffings in the compressed video bitstream as shown in Davis et al for the compressed video data within encoder and decoder of Bowater for the same well known video bit processing and standard compliance purposes as claimed.[20]

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[19] October 11, 2002, Examiner's Action at the bottom of page 4 to the top of page 5.

[20] October 11, 2002, Examiner's Action at the end of the first full paragraph on page 5.

Since the Examiner's Action dated October 11, 2002, in rejecting claims 1-3 and 5-7 for obviousness under 35 U.S.C. § 103(a) based upon a combination of the Bowater, et al. and Davis, et al. patents fails to identify what suggests,to one of ordinary skill in the art, combining those references to obtain the claimed invention, claims 1-3 and 5-7 traverse that rejection.

Claims 2 and 3 Traverse Rejection Under 35 U.S.C. § 112, Second Paragraph

The Examiner's Action dated October 11, 2002, maintains a rejection of claims 2 and 3 set forth in an Examiner's Action dated February 12, 2002, Paper No. 12, for being indefinite under 35 U.S.C. § 112, second paragraph. Claim 2 requires that:

> the assembled compressed video bitstream is decodable in accordance with the MPEG-1 standard . . .

Claim 3 requires that:

> the assembled compressed video bitstream is decodable in accordance with the MPEG-2 standard . . .

In maintaining the rejection of claims 2 and 3, the Examiner's Action dated February 12, 2002, states:

> [t]he particular claim to the "MPEG-1" and "MPEG-2" recommendations as shown in claims 2 and 3, respectively, are indefinite because there are many versions of the MPEG-1 and MPEG-2 recommendations and the recommends are continuously updated. The scope of the claim limitations cannot change over time, and unless the specification states a specific MPEG-1 and MPEG-2 version and date or a copy of the MPEG-1 and MPEG-2 recommendations are provided, the claims are indefinite. The recommendations are constantly changing, even up to the filing date of the application. Basically, the time frame between when the invention was reduced to practice till the time the application is filed, for example, there could be various

> versions of the recommendations. And unless the versions and dates of the recommendations are provided, the metes and bounds of the claimed limitations are not clearly set forth, and thus renders the claims indefinite.

First, it appears that the issue of the "Risk of the Future" which underlies the preceding rejection frequently arises in the context of claim rejections for lack of enablement rather than for claim indefiniteness. See Chisum § 7.03[3][c] and In re Metcalfe, 410 F.2d 1378, 161 USPQ 789 (CCPA 1969). In re Metcalfe holds that insufficiency of disclosure rejections due to "Risk of the Future" are to be decided on a case-by-case basis using a rule of reason analysis. Id. at 1382, 792. In re Metcalfe observes that there always exist a "possibility," however remote, that at some future date a material or an apparatus might no longer be available for practicing a patented invention, but that the existence of such a risk should not bar the issuance of a patent in every instance.

In *Ex parte* Saceman, 27 USPQ2d 1472, 1474 (Bd. Pat. App. & Int'f 1993), the Board of Appeals, following the holding of In re Metcalfe, held that "Risk of the Future" indefiniteness of claim terms must also be decided using a rule of reason analysis applied to the facts of the case. In *Ex parte* Logan, 20 USPQ2d 1465, 1469-70 (Bd. Pat. App. & Int'f 1991), the Board of Appeals ordered that a patent issue on an application having a specification which used "pseudo-code", metaphors and relative terminology to describe a computer-implemented patient inspiration detection method.

In the present application, the two Examiner's Action rejections of claims 2 and 3 quoted above allege that the claims will

become indefinite "because there are many versions of the MPEG-X recommendations and the recommends are continuously updated." Appellant observes that the various versions of the MPEG-[X] specification have all been published by the International Organization for Standardization ("ISO") and/or International Electrotechnical Commission ("IEC"). Thus, the use of metaphors and relative terminology, respectively MPEG-1 and MPEG-2 in claims 2 and 3 that Board of Appeals approved for computer related inventions in In *Ex parte* Logan, is reasonable for pending claims 2 and 3 because there exist little likelihood that ISO's and/or IEC's publications of the MPEG-1 and MPEG-2 specifications will become unavailable during the term of a patent issuing on the present application.

If need there be for further evidence that the rejection of claims 2 and 3 for indefiniteness under 35 U.S.C. § 112, second paragraph, is specious, the accompanying declaration of Mark Conover establishes that:

> despite minor changes occurring in the MPEG specification the invention disclosed and claimed in my patent application has been used successfully without change by one customer who has used it for several years probably in millions of instances!

Conclusion

For the reasons set forth in greater detail above, the Applicant respectfully submits that claims 1-3 and 5-7 traverse rejection for obviousness under 35 U.S.C. § 103(a) based upon a

combination of the Bowater, et al. and Davis, et al. patents as set forth in the Examiner's Action dated October 11, 2002, because:

1. contrary to the allegation in the Examiner's Action, the Bowater, et al. patent fails to disclose that its buffering technique might be applicable to anything other than motion video;
2. contrary to the allegation in the Examiner's Action, the Bowater, et al. patent lacks any disclosure regarding "visual pulsing" as that phrase is used in the pending application; and
3. the rejection in the Examiner's Action of claims 1-3 and 5-7 fails to identify what would suggest to one of ordinary skill in the art combining the cited references to obtain the claimed invention.

Furthermore, for the reasons set forth in greater detail above in the section which discusses the Florencio, et al. patent, the Applicant respectfully submits that dependent claim 4 traverses that claim's rejection for obviousness under 35 U.S.C. § 103(a) based upon a combination of the Bowater, et al. and Florencio, et al. patents, and also perhaps the Davis, et al. patent.

Finally, for the reasons set forth in greater detail above the Applicant respectfully submits that claims 2 and 3 traverse the rejection for indefiniteness under 35 U.S.C. § 112, second paragraph, set forth in the October 11, 2002, Examiner's Action.

Therefore, for the preceding reasons the Applicant respectfully requests that all rejections of claims 1-7 set forth in the

Examiner's Action dated October 11, 2002, be withdrawn, and that this patent application pass immediately to issue.

Respectfully submitted

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